

What is claimed is:

1. An adhesive composition for bonding two or more kinds of different members which comprises a brazing material and a
5 particulate material that reduces thermal stress.

2. An adhesive material according to claim 1, wherein a base metal for said brazing material is Au, Ag, Cu, Pd, Al or Ni, and said particulate material is ceramics fine particle, cermet fine particle or low-expansion metal fine particle.

10 3. An adhesive composition according to claim 1, wherein said particulate material is ceramics fine particle with a surface coated with a metal by plating or sputtering.

15 4. A composite member which comprises two or more kinds of different members differing in thermal stress from each other and an adhesive composition bonding two or more of said different members and comprising a brazing material and a particulate material that which reduces thermal stress.

20 5. A composite member according to claim 4, wherein a base metal for said brazing material is Au, Ag, Cu, Pd, Al or Ni, and said particulate material is ceramics fine particle, cermet fine particle or low-expansion metal fine particle.

6. A composite member according to claim 4, wherein said particulate material is ceramics fine particle with a surface coated with a metal by plating or sputtering.

25 7. A composite member according to claim 4, wherein at least one of two or more kinds of said different members is a ceramics member.

8. A composite member according to claim 4, wherein two or more kinds of said different members comprise a combination of a

ceramics member and a metallic member.

9. A composite member according to claim 4, which is a member for gas separation tubes.

10. A method for producing a composite member which comprises
5 two or more kinds of different members differing in thermal stress and opposing each other at a space sufficient to bond the members, wherein an adhesive composition for bonding two or more different members, comprised of a brazing material and a particulate material that reduces thermal stress, is poured into said space, and then
10 the adhesive composition to bond said members is cooled.

11. A method for producing a composite member according to claim 10, wherein said base metal of said brazing material is Au, Ag, Cu, Pd, Al or Ni, and said particulate material is ceramics fine particle, cermet fine particle or low-expansion metal fine particle.

12. A method for producing a composite member according to claim 10, wherein said particulate material is ceramics fine particle with the surface coated with a metal by plating or sputtering.

13. A method for producing a composite member according to claim 10, wherein at least one of two or more kinds of said different
20 members is a ceramics member.

14. A method for producing a composite member according to claim 10, wherein said composite member comprises a ceramics member and a metallic member.

15. A method for producing a composite member which comprises
25 two or more kinds of different members differing in thermal stress and opposing each other at a space sufficient to bond the members, wherein a given amount of a ceramics fine particle or a cermet fine particle is filled into said space, and subsequently poured into a brazing material in a molten state comprising a given amount of

a noble metal element as a base, then cooled to bond said members.

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